

From: [Tina Laidlaw](#)
To: [Suplee, Mike](#)
Cc: [Urban, Eric](#)
Subject: Re: Endnote 2, DEQ-12 part A
Date: 06/14/2012 09:50 PM
Attachments: [Colorado Nutrients - Duration and Frequency.docx](#)

Hmm... well, thanks for this. But, I think there will still be some issues. For example, the language references an average concentration-- -but the AM doesn't use an average for the calculation. Also, you reference the 30-day (monthly) period -- again, not used for Assessment Methods.

CO's duration and frequency components for their nutrient criteria is attached. You will note that an annual median (streams) or annual average (lakes) concentration will be applied for permitting and also for the AM. The low flow piece is the unique permitting component.

My understanding (and I will confirm this internally) is that if the WQS references an average and a 30 day period, the AM will need to follow that approach. That is going to be the most challenging part to reconcile because currently you are suggesting a monthly average for permitting and a 20% exceedance frequency using single sample data for the AM. Those are 2 different approaches. In the spirit of brainstorming, could you do a 1 in 3 exceedance frequency based on a monthly average (assumes you could calculate a monthly average for assessment purposes)? That was the approach used in Florida and is similar to CO.

Feel free to call Dave or Tonya while I'm out on this issue. I'll give them the heads up.. Also, they may have some other ideas on "fixes".

Thanks for working on this!

Tina



Tina Laidlaw
USEPA Montana Office
10 West 15th Street, Suite 3200
Helena, MT 59626
406-457-5016

▼ "Suplee, Mike" ---06/14/2012 03:06:05 PM---Hi Tina; I have drafted language changes to DEQ-12's endnote 2 that could allow Monitoring and Asses

From: "Suplee, Mike" <msuplee@mt.gov>
To: Tina Laidlaw/MO/R8/USEPA/US@EPA
Cc: "Urban, Eric" <EUrban@mt.gov>
Date: 06/14/2012 03:06 PM
Subject: Endnote 2, DEQ-12 part A

Hi Tina;

I have drafted language changes to DEQ-12's endnote 2 that could allow Monitoring and Assessment to use their methodology (which includes the 20% allowable exceedence rate), and Permitting to have a clear definition of duration, which they need. Here it is:

“(2) No wadeable stream or large river referenced in Table12A-1 shall have an average concentration that exceeds the values shown based upon a monthly (30-day) period **at a flow equal to or less than the seasonal 14Q10**”.

New part in underlined in bold.

Our thinking is as follows: Permitting has a clearly-defined duration (30 day average) and that average now pertains to the flow corresponding to the low-flow Permitting uses in deriving a permit. At the same time, it allows our Monitoring and Assessment section to use the nutrient assessment methodology independently because they collect nutrient data during all kinds of base flows (not just at the 14Q10 base flow). A sharp assessor may also realize that, with the modification provided, if they happen to have collected their 12 nutrient samples in a 14Q10 (or lower) flow year, they could, in addition to the 20% exceedence test, compare the average of their samples to the criteria as another means of assessing the data. But that will be a very rare event so we don't really need to worry about it.

If we end up using a different low-flow, then of course that would need to be changed in the endnote.

Let me know your thoughts. Feel free to pass on the Dave Moon if needed.

Mike

Colorado Nutrient Criteria - Duration and Frequency

WQS:

Lakes: summer (July 1-September 30) average (ug/L) in the mixed layer of lakes (median of multiple depths), allowable exceedance frequency 1-in-5 years.

Rivers/Streams: annual median (ug/L), allowable exceedance frequency 1-in-5 years.

Permits:

The low flow policy (in WQS rule) includes this regarding low flows for river/stream discharges:

- (c) Total phosphorus and total nitrogen limitations: the annual median of the daily average flows with a 1 in 5 year recurrence interval.

Assessment:

The assessment method hasn't yet been developed and finalized, but EPA is expecting that Colorado will use an assessment method for nutrients that is consistent with the magnitude, duration and frequency of the WQS (i.e., calculate summer averages (lakes) and annual averages (streams) and one exceedance is allowable over each 5 year period).